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OHM Corporation

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**SITE-SPECIFIC
HEALTH AND SAFETY PLAN
FOR
EMERGENCY REMEDIAL ACTIVITIES AT THE
NEW VERNON ROAD, MILLINGTON
ASBESTOS SITE
MEYERSVILLE, NEW JERSEY**

Prepared for:

**United States Environmental Protection Agency
Region II**

Prepared by:

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1.0 INTRODUCTION

OHM Remediation Services Corp. (OHM) is pleased to present this Health and Safety Plan (HASP) which has been developed for the United States Environmental Protection Agency (USEPA).

This HASP documents the policies and procedures which protect workers and the public from potential hazards posed by work at this site. OHM considers safety the highest priority during work at a site containing potentially hazardous materials and has established a standard policy of zero exposure which must be upheld on all projects. All project activities will be conducted in a manner that minimizes the probability of injury, accident, or incident occurrence. The Site Safety Plan Acknowledgment (Appendix A) will be signed by all who actively participate at this project.

Although the plan focuses on the specific work activities planned for this site, it must remain flexible because of the nature of this work. Conditions may change and unforeseen situations may arise that require deviations from the original plan. This flexibility allows modification by the OHM supervisors and health and safety officials.

1.1 SITE HISTORY

The site is located in Meyersville, New Jersey. The property is currently in use as a private residence. The nearest neighbor is approximately 1/8 mile from the site.

Analysis of bulk samples has identified the presence of asbestos in soil and household vacuum cleaner samples. The extent of contamination, which appears to have originated from landfill material deposited on this site in the past, is unknown.

1.2 SCOPE OF WORK

Tasks to be accomplished include:

- o Pave roadways and parking areas.
- o Vacuum interior of garage, house, and unoccupied house.
- o Encapsulate dirt road and landfill area, and place fabric liner over landfill area.
- o Place soil cover on pond area.
- o Remove asbestos shingles on shed.

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- o Erect soil erosion and snow fence around perimeter of landfill.
- o Stage logs in a selected area.

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2.0 KEY PERSONNEL AND MANAGEMENT

The Project Manager (PM), Response Manager (RM), Certified Industrial Hygienist (CIH) and Site Safety Officer (SSO) are responsible for formulating and enforcing health and safety requirements, and implementing the HASP.

2.1 CERTIFIED INDUSTRIAL HYGIENIST

The CIH should be responsible for the contents of the HASP and should ensure that the HASP complies with all federal, state and local health and safety requirements. If necessary, the CIH can modify specific aspect of the HASP to adjust for on-site changes that affect safety. The CIH will coordinate with the SSO on all modifications to the HASP and will be available for consultation when required. The CIH will not necessarily be on site during OHM activities.

2.2 SITE SAFETY OFFICER

The SSO has responsibility for administering the HASP relative to site activities, and will be in the field full-time while site activities are in progress. The SSO's primary operational responsibilities will be monitoring, including personal and environmental monitoring, personal protective equipment maintenance, and assignment of protection levels. The SSO will be the main contact in any on-site emergency situation. The SSO will direct all field activities involved with safety and be responsible for stopping work when unacceptable health or safety risk exists. The SSO is responsible for assuring that all on-site personnel understand and comply with all safety requirements.

2.3 PROJECT MANAGER

The PM has the overall responsibility for the project and to assure that the goals of the construction remedial action are attained in a manner consistent with the HASP requirements. The PM will coordinate with the RM and the SSO to assure that the remedial action goals are completed in a manner consistent with the HASP.

2.4 RESPONSE MANAGER

The RM is responsible for field implementation of the HASP. The RM will establish and ensure compliance with site control areas and procedures and coordinate these supervisory responsibilities with the site SSO.

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2.5 EMPLOYEE SAFETY RESPONSIBILITY

Each employee is responsible for personal safety as well as the safety of others in the area. The employee will use all equipment provided in a safe and responsible manner as directed by the RM. All OHM personnel will follow the policies set forth in OHM's Employee Safety Guide and the OHM Health and Safety Procedures.

2.6 OSHA RECORDS

Required records including the OSHA 200 log are maintained at the OHM Divisional offices.

2.7 KEY SAFETY PERSONNEL

The following individuals share responsibility for health and safety at the site.

Response Manager	Taylor Treat (site phone)
Site Safety Officer	TBD (site phone)
Program Manager	Robert Panning 609-987-0010
NER Health and Safety Manager	Kevin McMahon, M.S., CIH 609-443-2800 (office) 609-421-7523 (pager)
Vice President, Health and Safety	Fred Halvorsen, Ph.D., PE, CIH 800-231-7031

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3.0 JOB HAZARD ANALYSIS

This section outlines the principle chemical, physical and environmental hazards which workers may be exposed to during this project.

3.1 CHEMICAL HAZARDS

3.1.1 Asbestos

Exposure Routes:

- o Inhalation
- o Ingestion

TLV/PEL:

- o 0.2 fibers/cc

Effects of Overexposure:

- o Scarring of lung tissue (asbestosis) resulting in loss of lung function;
- o Cancer of the lungs, chest cavity, gastrointestinal tract.

Personnel will be removed from the work site and placed under observation immediately if the following initial symptoms persist:

- o Dizziness or stupor
- o Nausea, headaches, or cramps
- o Irritation of the eyes, nose, or throat
- o Euphoria
- o Chest pains and coughing
- o Rashes or burns

3.2 PHYSICAL HAZARDS

To minimize physical hazards, OHM has developed standard safety protocols which will be followed at all times. Failure to follow safety protocols will result in expulsion of a crew member from the site.

All OHM personnel are familiar with the field activities which will be conducted at the site. They are trained to work safely under various field conditions. The RM and SSO will observe the general work practices of each crew member and equipment operator, and enforce safe procedures to minimize physical hazards. Also, hard hats, safety glasses, and steel-toe safety boots are required in all areas of the site.

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3.3 ENVIRONMENTAL HAZARDS

Environmental factors such as weather, wild animals, insects, and irritant plants always pose a hazard when performing outdoor tasks. The SSO and RM will make every effort to alleviate these hazards should they arise.

3.3.1 Heat Stress

The combination of warm ambient temperature and protective clothing increases the potential for heat stress. In particular:

- o Heat rash
- o Heat cramps
- o Heat exhaustion
- o Heat stroke

Heat stress is covered in detail during our 40-hour OSHA 20 CFR 1910.120 approved pre-employment course. In addition, this information is discussed during safety meetings before each workday. Workers are encouraged to increase consumption of water and electrolyte-containing beverages such as Gatorade.

At a minimum, workers will break every 2 hours for 10- to 15-minute rest periods. In addition, workers are encouraged to take rests whenever they feel any adverse effects that may be heat-related. The frequency of breaks may need to be increased upon worker recommendation to the SSO and RM.

A work/rest schedule can be calculated based on heat stress monitoring results. Monitoring consists of taking the radial pulse of a worker for 30 seconds immediately after exiting the work area. The frequency of monitoring is provided herein.

<u>Ambient Temperature</u>	<u>Level D PPE</u>	<u>Level C PPE/ Modified Level D</u>
90° F or above	After each 45 minutes of work	After 15 minutes of work
87.5 F-90 F	After 60 minutes of work	After 30 minutes of work
82.5-87.5 F	After 90 minutes of work	After 60 minutes of work
77.5-82.5 F	After 120 minutes of work	After 90 minutes of work
72.5-77.5 F	After 150 minutes of work	After 120 minutes of work

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If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by 1/3 and keep the rest period the same. If the heart rate still exceeds 110 beats per minute at the next rest period, increase the following rest period by 1/3. The initial rest period should be at least 5 minutes.

Monitoring for heat stress will begin when the ambient temperature reaches or exceeds 70 degrees Fahrenheit, when wearing Level C PPE, or 80 degrees Fahrenheit for site activities performed in Level D.

3.4 TASK-SPECIFIC RISK ASSESSMENT

3.4.1 Road Work

Road work tasks include paving, encapsulation, installation of a fabric liner, and laying-down soil.

These tasks involve potential for asbestos exposure from contaminated soils (see Section 3.1.1 for possible health effects).

In addition, workers are at risk of injuries from physical hazards. General hazards associated with these tasks include the following:

- o Personnel slipping, tripping, and falling because of improperly stored equipment and vegetation.
- o Puncture wounds and lacerations from sharp edges of power and hand tools.
- o Striking or being struck by equipment, tools, and vehicles.
- o Eye injuries from flying particles and protruding objects.
- o Injuries to feet from falling objects, rolling heavy equipment, or sharp objects.
- o Back and other muscle sprains or strains from improper material handling or excessive lifting.
- o Skin contact with asphalt paving materials may cause skin irritation or skin burns. Inhalation of coal-tar products may cause eye, nose and throat irritation. Certain of these compounds have been associated with increased risk of cancer.

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To prevent injury, the following general precautions will be taken:

- o All hand and power tools will be maintained in a safe condition.
- o Guards will be kept in place during use.
- o Electric power-operated tools will either be double insulated or properly grounded.
- o Walkways will be kept clear of equipment, vegetation, excavated material, or other obstructions.
- o Proper work gloves will be provided and used when the possibility of lacerations or other injury may be caused by sharp edges or objects.
- o Hard hats, safety glasses with side shields, and safety boots will be worn.
- o Employees exposed to vehicular traffic will wear warning vests.
- o Employees will observe proper lifting techniques and obey sensible lifting limits.
- o Material-handling and earth moving equipment will be equipped with rollover protective structures (ROPS).
- o Workers₃ exposed to excessive asphalt fumes (5 mg/m³ or greater) must use proper respiratory protection.
- o Exposed skin should be protected from contact with asphalt by using gloves and protective clothing.

3.4.2 Vacuuuming

Asbestos particles were identified in the materials contained in the household vacuum cleaner. Workers will vacuum the interior of several structures on site. Potential exposures to asbestos are unknown at present, but are unlikely to exceed the level of protection afforded by a full-face respirator, (i.e., 5 fibers per cc). If air sampling is conducted prior to this task, the results shall be used to select initial respiratory protection, otherwise full-face respiratory protection shall be provided.

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Physical hazards include primarily slips, trips and falls from electrical cords, debris or objects in the walkway. Areas should be cleared to eliminate these hazards. Electrical hazards may be present from faulty grounding of vacuum cleaners, cords, plugs and receptacles. Vacuum cleaners should be inspected and ground fault protection provided where necessary.

3.4.3 Asbestos Removal

Asbestos shingles will be removed from a shed. The removal process may expose workers to the health hazards associated with asbestos (as described in 3.1.1) and construction-related physical hazards.

Workers may be required to work on elevated platforms, (i.e., scaffolds, manlifts, or ladders). Fall protection will be required for transporting personnel and work activities at 5 feet or more above the ground. Workers on scaffolds must wear safety belts attached to a lifeline. The lifeline must be securely attached to substantial areas of the structure (not the scaffold). During work from an aerial lift a body belt must be worn with a lanyard attached to the boom or basket. Fixed ladders over 20 feet in height must have a cage, well, or ladder safety device.

Walking and working surfaces may become wet and slippery due to insulation debris and wetting agents. Steps will be taken to minimize the possibility of slips and falls. Footwear with adequate traction will be worn. Cuts and lacerations are possible from the use of knives and other insulation-cutting tools. A retractable blade utility knife and proper hand protection will be used. Gloves made of Kevlar provide excellent cut resistance.

Proper protective clothing and equipment is necessary to avoid contact with or inhalation of hazardous materials.

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4.0 WORK ZONES

The site is broken into zones based on the operations and levels of contamination determined by the site characterization.

4.1 ASBESTOS REMOVAL, DECONTAMINATION AND ROAD WORK OPERATIONS

The site work areas will be divided into five zones: a work area (exclusion zone), dirty (equipment room, a shower room, a clean room, and a support zone. The exclusion zone will consist of all active work areas. Personnel entering the exclusion zone will wear the prescribed level of protective equipment.

4.1.1 Exclusion or Work Zone

The interiors of the site's buildings and external active work areas will be considered exclusion zones.

4.1.2 Dirty Equipment Room

The dirty room will be built next to the exclusion zone. It will contain labeled bags and containers for the disposal of contaminated waste, hold equipment used in the exclusion zone, and serve as an area where workers remove their protective coveralls.

4.1.3 Shower Room

The shower room will be situated between the dirty room and the clean room. All workers will shower before entering the clean room. The shower will also be used to clean asbestos-contaminated equipment and materials (i.e., outside of bags and tools).

4.1.4 Clean Room

The clean room will be an area where workers will remove their street clothes/personal articles and change into personal protective equipment. Respirators, clean Tyveks, towels, and street clothes are the only articles allowed in the clean room.

4.1.5 Support Zone

The clean area will consist of those areas around the buildings, and beyond the contamination reduction zone, where the decontamination trailer (if used), office trailer (if used), storage trailers, and parking areas are located.

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5.0 PROTECTIVE EQUIPMENT

This section of the health and safety plan will outline the levels of personnel protective equipment for the various tasks.

5.1 ASBESTOS REMOVAL, DECONTAMINATION AND ROAD WORK

Protective equipment for asbestos removal, decontamination, and road work is described below.

5.1.1 Level C Protection

OHM and other approved personnel entering an exclusion zone for asbestos work, when the criteria for air purifying respirators have been met, will wear the following items:

- o Hearing protection (if necessary)
- o Tyvek coveralls with hoods taped to coveralls
- o Vinyl sample gloves
- o Protective outer gloves to be determined by task
- o Cotton, leather, or other outer gloves to protect gloves from damage caused by handling sharp-edged material and to protect hands
- o Hard hats
- o Steel-toe safety shoes/boots
- o Vinyl disposable booties (one pair)
- o Full-face respirators with HEPA filter cartridges

Joints between various garments will be securely sealed with duct tape.

The support area will also serve as the site-safety center where the following safety equipment will be maintained:

- o ABC-type fire extinguishers
- o First-aid kit, industrial size
- o Emergency signal horn
- o Stretcher

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5.1.2 Level D Protection

Personnel in the support area will wear Level D protection. Personnel stocking the contamination reduction zone will also wear Level D protection as follows:

- o Hard hats
- o Work gloves
- o Steel-toe boots and shoes
- o Eye protection

In addition to the items listed above, contamination reduction zone personnel will wear the following:

- o Vinyl sample gloves
- o Disposable vinyl booties

5.1.3 Personnel Protective Equipment Donning Procedures For Level C

Personnel will don protective equipment in the support zone according to the following procedures:

- o Don Tyvek suits
- o Don gloves and booties
- o Seal all interconnections with duct tape
- o Don air-purifying respirators equipped with new cartridges
- o Don overboots and hard hats
- o Proceed into exclusion zone

5.2 CARTRIDGE CHANGES

Cartridges will be changed a minimum of once daily. However, water saturation of the HEPA filter or dusty conditions may necessitate more frequent changes. Changes will occur when personnel begin to experience increased inhalation resistance or breakthrough of a chemical warning property.

5.3 INSPECTION AND CLEANING

Respirators are checked periodically by a qualified individual and inspected before each use by the wearer. All respirators and associated equipment will be decontaminated and hygienically cleaned after use.

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5.4 FIT TESTING

Annual respirator fit tests are required of all personnel wearing negative-pressure respirators. The test will use isoamyl acetate or irritant smoke. The fit test must be for the style and size of the respirator to be used. Quantitative fit testing will be performed for workers with exposure to asbestos.

5.5 FACIAL HAIR

No personnel who have facial hair which interferes with the respirator's sealing surface will be permitted to wear a respirator and will not be permitted to work in areas requiring respirator use.

5.6 CORRECTIVE LENSES

Normal eyeglasses cannot be worn under full-face respirators because the temple bars interfere with the respirator's sealing surfaces. For workers requiring corrective lenses, special spectacles designed for use with respirators will be provided.

5.7 CONTACT LENSES

Contact lenses will not be worn with any type of respirator.

5.8 MEDICAL CERTIFICATION

Only workers who have been certified by a physician as being physically capable of respirator usage will be issued a respirator. Personnel unable to pass a respiratory fit test or without medical clearance for respirator use will not be permitted to enter or work in areas on site that require respiratory protection. Employees receive a written physicians opinion that they are fit for general hazardous waste operations as per 29 CFR 1910.120(f)(7).

5.9 SITE-SPECIFIC RESPIRATORY PROTECTION PROGRAM

The OHM Respiratory Protection Program complies with 29 CFR 1910.134. The primary objective of respiratory protection is to prevent inhalation of atmospheric contamination. When engineering measures to control contamination are not feasible, or while they are being implemented, personal respiratory protective devices will be used.

The criteria for determining respirator need are contained in Section 7.0. The R53HE cartridges will protect employees from the hazardous substances specific to this site. All respirator users are OSHA trained in proper

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respirator use and maintenance. The RM and SSO will observe workers during respirator use for signs of stress and will monitor air levels of contaminants to ensure that respiratory protection is sufficient. The RM, CIH, and SSO will also evaluate this HASP weekly to determine its continued effectiveness.

All respirators and cartridges used will provide adequate protection against the hazards for which they were designed in accordance with applicable standards. All persons assigned to use respirators will have medical clearance to do so.

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6.0 DECONTAMINATION PROCEDURES

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Personnel and equipment will be decontaminated to ensure that contaminants are removed before proceeding to the clean zone.

6.1 ASBESTOS DECONTAMINATION PROCEDURE

Decontamination of personnel exiting asbestos exclusion zones will proceed in the following order:

- o Remove gross contamination and debris from suits before exiting exclusion zone.
- o In the dirty (equipment) room workers will remove hardhats, suits, booties, and sample gloves. KEEP RESPIRATORS ON!
- o Place discarded clothing in labeled asbestos bags.
- o Seal asbestos bags.
- o Enter shower room area and remove respirator under the shower.
- o Respirators will be cleaned and disinfected on a daily basis. Employees will be responsible for cleaning and maintaining their own respirators.

6.2 EQUIPMENT DECONTAMINATION

Equipment used in exclusion zones will be decontaminated before leaving the site.

- o Enter the shower room area and remove respirators. In this area, respirators will be hung on a rack for reuse. Respirators will be cleaned and disinfected on a daily basis. Employees will be responsible for cleaning and maintaining their own respirators.

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7.0 AIR MONITORING

Air monitoring will be used initially and periodically, to identify and quantify airborne levels of hazardous substances in order to determine the appropriate level of employee protection needed onsite. As a minimum, periodic monitoring shall be conducted when:

- o Work begins on a different portion of the site.
- o Contaminants other than those previously identified are being handled.
- o A different type of operation is initiated.

High-risk employees (those closest to the source of contaminant generation) shall receive personal monitoring sufficient to characterize employee exposure.

Work practices should be conducted so as to minimize airborne dust levels. If necessary, measures will be taken to reduce atmospheric dust levels. Removal of heavy deposits of dust on floors and other surfaces or wetting methods may be necessary to prevent airborne levels of dust from becoming excessive.

Levels of protection will be as follows:

Levels of respirator protection for asbestos will be as follows:

<u>Airborne Concentration</u>	<u>Required Respirator</u>
Not in excess of 2f/cc (10xPEL)	Half-mask APR with high-efficiency filters
Not in excess of 10f/cc (50xPEL)	Full face piece with high-efficiency filters
Not in excess of 100f/cc (100xPEL)	Any power APR with high-efficiency filters Any supplied-air respirator in continuous flow
Not in excess of 200f/cc (1,000xPEL) or unknown	Full face piece supplied-air respirator operated in pressure demand mode equipped with an auxiliary positive pressure SCBA

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7.1 CONFINED-SPACE ENTRY

Before personnel enter a confined space area, LEL/O₂ measurements must be taken.

7.2 HOT-WORK PERMIT PROCEDURE

Before personnel begin work involving welding, cutting, or other high heat-producing operations where flammable or combustible vapors may be present, LEL/O₂ measurements must be collected.

7.3 AIR MONITORING LOG

The site supervisor will ensure that all air-monitoring data is logged into a monitoring logbook. Data will include instruments used, wind direction, work process, etc. The OHM CIH will periodically review this data.

7.4 CALIBRATION REQUIREMENTS

The LEL/O₂ meter will be calibrated daily before use. Data, time, span gas, or other standard, and name of person performing the calibration will be detailed in the monitoring logbook.

7.5 ASBESTOS AIR SAMPLING

Air sampling and analysis for asbestos will be collected and analyzed according to NIOSH Method 7400. In this procedure, samples are collected in the "breathing zone" of the worker using personal samplings pumps (Gillian Model HFS-513 or equivalent) equipped with 0.8 micron mixed cellulose ester filters housed in 25mm diameter cassettes with an open-faced 50mm extension cowl. The pumps flow rate will be pre- and post-calibrated. The sampling rate will be approximately 2.0 liters per minute.

Samples will be shipped to the laboratory in a rigid container with sufficient packing material to prevent dislodging the collected fibers. Packing material which might generate a high electrostatic charge (e.g., expanded polystyrene) will not be used. Analysis will be performed by phase contract microscopy.

Initial monitoring will be conducted on a representative number of workers at the beginning of the project and will represent full shift exposure for employees in each work area. Daily monitoring will then be conducted in areas which prove to be or are expected to be above the permissible

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exposure limit of 0.2 fibers/cc-air (8-hour time weighted average). If daily monitoring reveals that exposures are below the action level of 0.1 fibers/cc-air, monitoring may be discontinued. Monitoring will be reinstituted when work moves to another site or when operations change.

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8.0 EMERGENCY RESPONSE

Prior to field activities, the RM will plan emergency egress routes and discuss them with all field personnel.

8.1 EMERGENCY SERVICES

A tested system will exist for rapid and clear distress communication. All personnel will be provided concise and clear directions and accessible transportation to local emergency services. A map outlining directions to the nearest hospital will be posted on site.

The following emergency equipment will be present on the site:

- o Fire extinguishers
- o Industrial first-aid kit
- o Eye wash bottles
- o Emergency shower

8.2 COMMUNICATION

Each member of the site entry team will be able to communicate with another entry team member at all times. Communications may be by way of the following methods:

- o Sound (air horn)
- o Electronic (radio, bull horn)
- o Visual (hand signals)

The following standard hand signals will be mandatory for all employees regardless of other means of communication:

- o Hand gripping throat--Out of air, cannot breath
- o Hands on top of head--Need assistance
- o Thumbs up--OK, I'm alright, I understand
- o Thumbs down--No, negative
- o Gripping partner's wrist, or gripping both hands on wrist--Leave area immediately

8.3 EMERGENCY EVACUATION FROM EXCLUSION AND CONTAMINATION-REDUCTION ZONES

Any personnel requiring emergency medical attention will be evacuated immediately from EZ and CRZ. Personnel will not enter the area to attempt a rescue if their own lives would

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be threatened. The RM and SSO decision whether or not to decontaminate a victim prior to evacuation is based on the type and severity of the injury and the nature of the contaminant.

If decontamination cannot be performed because it may aggravate the injury or delay life-saving treatment, the emergency response personnel will:

- o Wrap the victim in blankets or plastic to reduce contamination of other personnel and emergency vehicles.
- o Alert emergency and medical personnel to potential contamination; instruct them about specific decontamination procedures.
- o Send site personnel familiar with the incident to the hospital with the victim.

8.4 FIRST AID

Qualified personnel only will give first aid and stabilize an individual needing assistance. Professional medical assistance will be obtained at the earliest possible opportunity.

To provide first-line assistance to field personnel in the case of illness or injury, the following items will be made immediately available:

- o First-aid kit
- o Portable emergency eye wash
- o Supply of clean water

8.5 EMERGENCY ACTIONS

If actual or suspected serious injury occurs, these steps will be followed:

- o Remove the exposed or injured person(s) from immediate danger.
- o Render first aid if necessary. Decontaminate affected personnel after critical first aid is given.
- o Obtain paramedic services or ambulance transport to local hospital. This procedure will be followed even if there is no visible injury.
- o Other personnel in the work area will be evacuated to a safe distance until the site supervisor determines that it is safe for work to

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resume. If there is any doubt regarding the condition of the area, work will not commence until all hazard-control issues are resolved.

- o Notify client of incident.

8.6 GENERAL EVACUATION PLAN

In the general case of a large fire, explosion, or toxic vapor release, a site evacuation will be ordered and will follow these steps:

- o Sound the applicable alarm and advise client representative.
- o Evaluate the immediate situation and downwind direction. All personnel will evacuate in the upwind direction.
- o All personnel will assemble in an upwind area. When the situation permits, a head count will be taken.
- o Determine the extent of the problem. Dispatch a response team in protective clothing and self-contained breathing apparatus on site to evacuate any missing personnel or to correct the problem.

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8.7 EMERGENCY TELEPHONE NUMBERS

The following telephone numbers will be posted at the site before work begins:

Fire Department: TBD

Police Department: TBD

New Jersey Poison Control Center: 800-962-1253

Hospital: TBD

Hospital Phone Number: TBD

Directions to the hospital: TBD

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9.0 TRAINING REQUIREMENTS

Training requirements are provided in the following sections.

9.1 HAZARDOUS WASTE WORKERS

As a prerequisite to employment at OHM, all field employees are required to take a 40-hour training class and pass a written examination. This training covers all forms of personal protective equipment, toxicological effects of various chemicals, handling of unknown tanks and drums, confined-space entry procedures, and electrical safety. This course is in full compliance with OSHA requirements in 29 CFR 1910.126. In addition, all employees receive annual 8-hour refresher training and supervisory personnel receive an additional 8-hour training in handling hazardous waste operations.

All personnel entering the exclusion zone will be trained in the provisions of this site safety plan and be required to sign the Site Safety Plan Acknowledgment in Appendix A.

9.2 ASBESTOS WORKERS

Training shall also have been conducted to meet OSHA requirements for asbestos workers (29CFR1926.58). Training will include the following:

- o Methods of identifying asbestos and related materials
- o The health effects associated with asbestos exposure
- o The relationship between smoking and asbestos in producing lung cancer
- o The nature of operations that could result in exposure to asbestos
- o The importance of necessary protective controls to minimize exposure
- o The purpose, proper use, fitting instructions, and limitations of respirators

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- o The proper work practices for performing an asbestos job
- o Medical surveillance program requirements

Documentation that personnel have read this safety plan will be kept on site.

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10.0 MEDICAL SURVEILLANCE PROGRAM

All OHM personnel participate in a medical and health monitoring program. This program is initiated when the employee starts work with a complete physical and medical history and is continued on a regular basis. A listing of OHM's worker medical profile is shown below. This program was developed in conjunction with a consultant toxicologist. Other medical consultants are retained when additional expertise is required.

The medical surveillance program meets the requirements of the OSHA Standard 29 CFR 1910.120 (f).

TABLE 10.1

WORKER MEDICAL PROFILE

<u>Item</u>	<u>Initial</u>	<u>Annual</u>
Medical History	X	X
Work History	X	X
Visual Acuity and Tonometry	X	X
Pulmonary Function Tests	X	X
Physical Examination	X	X
Audiometry Tests	X	X
Chest X-Ray	X	X
Complete Blood Counts	X	X
Blood Chem. (SSAC-23 or equivalent)	X	X
Urinalysis	X	X
Dermatology Examination	X	X
Electrocardiogram/Stress Test	X	X (based on age)

Specific Tests (as required):

(PCB blood or fat, urine mercury, urine arsenic, urine phenol, urine halomethanes, blood cyanide, cholinesterase-pseudo-cholinesterase, nerve conduction velocity tests, blood lead, urine lead.)

10.1 EXAMINATION SCHEDULE

Employees are examined initially upon start of employment, annually thereafter, and may be examined upon termination of employment. Unscheduled medical examinations are conducted:

- o At employee request after known or suspected exposure to toxic or hazardous materials

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- o At the discretion of the client, the CIH, SSO, or OHM occupational physician after known or suspected exposure to toxic or hazardous materials
- o At the discretion of the OHM occupational physician

All nonscheduled medical examinations will include, as a minimum, all items specified above for periodic surveillance examination, with the exception of the chest X-ray, which will be conducted at the discretion of the occupational physician performing the examination.

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**APPENDIX
A**

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APPENDIX A
HEALTH AND SAFETY PLAN CERTIFICATION

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I HAVE READ THE SITE SAFETY PLAN FOR THIS SITE AND FULLY UNDERSTAND ITS CONTENTS.

DATE

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be from a notebook or a standard ruled sheet of paper. There is no handwriting or other markings on the page.

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**OHM****— HEALTH AND SAFETY PROCEDURES**

SUBJECT: CONTRACTOR REQUIREMENTS	NUMBER
	36
	PAGE
	1 of 1
	DATE FIRST PUBLISHED
	5/89

1. POLICY

Contractors of OHM will comply with all applicable health and safety regulations as well as OHM site safety plans.

2. PURPOSE

The purpose of the procedure is to provide OHM contracting agents a method to verify contractor compliance with health and safety requirements.

3. REQUIREMENTS

- 3.1 Contracting agents shall forward copies of the attached documents to prospective contractors or subcontractors as part of the contractor prequalification process.
- 3.2 OHM contracting agents shall assure completion of the Contractor Site Safety Rules Checklist and maintain copies with the project file.
- 3.3 Project managers shall maintain copies of forms at project sites for issuance to contractors.
- 3.4 Contractor employees shall attend a site safety plan review prior to the start of each project and sign the acknowledgement.
- 3.5 Contractors who use OHM owned personal protective equipment or other supplies will sign the indemnification and release agreement.
- 3.6 Copies of all the forms described here follow this procedure.

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ABD 002 0281

APPENDIX
R

APPENDIX B
OHM HAZARD COMMUNICATION PROGRAM

ABD 002 0282

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HAZARD COMMUNICATION PROGRAM

1.0 GENERAL

The following written hazard communication program has been established for OHM Corporation. The purpose of this program is to transmit information about the various chemical hazards in the work place to the workers using various media. The transmittal of information will be accomplished by means of a comprehensive hazard communication program, which will include container labeling and other forms of warning, material safety data sheets, and employee training in accordance with 29 CFR 1910.1200 and 29 CFR 1926.59.

The program will be available in corporate and regional Health and Safety Departments for review by all employees. It will also be available in the corporate library and clearly marked "Employee Right-to-Know" stations located within each individual shop and on each job site. OHM Corporation will accomplish the hazard communication requirements through formal safety training, departmental safety meetings, and job site safety meetings.

2.0 RESPONSIBILITIES

Purpose: Overall responsibility rests with all corporate officers of OHM Corporation. A brief outline of responsibilities for those persons directly involved with the program will follow. These responsibilities are not all inclusive, but are designed to give guidance in initial and long-term program development since each area is different. These responsibilities may vary.

Scope: This program is intended to cover those employees who are directly involved with the handling of hazardous materials or supervision of those activities.

2.1 Health and Safety Department Responsibilities

1. Review operations with supervisors to determine what tasks require hazard communication training.
2. Advise supervisory people as to which materials may need to be considered hazardous initially and eventually to ensure that hazard task determination is being done according to the written policy.
3. Follow up through safety meetings and safety audits to ensure that supervisors are carrying out prescribed company policy.
4. Notify supervisors of any operating changes affecting the hazardous materials being used.

5. Periodically audit the Hazard Communication Program's progress. Initially, this should be done biweekly, but later the audit may be done on a monthly or quarterly basis.

2.2 Training Department Responsibilities

1. Ensure that up-to-date records are maintained on training of all employees required to handle hazardous materials. The supervisor should keep copies of these records and should also send copies of the initial training to the corporate training secretary for the training file.
2. Educate personnel upon initial training to the requirements of the Hazard Communication Standard.

2.3 Supervisors Responsibilities

1. Identify jobs requiring the use of hazardous chemicals and provide lists of those jobs and chemicals to the Health and Safety Department.
2. Provide the training required by the Hazard Communication Standard and document training of employees in the safe handling of hazardous materials.
3. Inspect engineering controls and personal protective equipment before each use. Health and Safety can help determine a suitable inspection plan for each application as needed.
4. Make daily surveys of the work area to ensure that safe practices are being followed. Advise employees of unsafe work practices on the first occasion and consider further violations as disciplinary violations.
5. Ensure required labeling practices are being followed. Labels should be affixed to the container when it arrives. If the contents are transferred to another container, then all label information (manufacturer, product name, and product number) must also be affixed to the new container, so that all containers of the material, regardless of size, are labeled.
6. Enforce all applicable safety and health standards through periodic audits.
7. Before ordering a material, determine if a Material Safety Data Sheet exist on file. Request an MSDS for any material without one.

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8. Send all new MSDSs to the Health and Safety Department after making a copy for the Employee Right-to-Know file.
9. Provide contractors with the necessary information to avoid possible hazardous situations.

2.4 Employee Responsibilities

1. Obey established safety rules and regulations.
2. Use all safety procedures and personnel protective equipment as required by company procedures.
3. Notify supervisor of the following:
 - a. Any symptoms or unusual effects that may be related to the use of hazardous chemicals.
 - b. Any missing or unreadable labels on containers.
 - c. Missing, damaged, or malfunctioning safety equipment.
4. Use approved labels on containers; do not remove labels (labels will be located in the warehouse).
5. Do not use unapproved containers for hazardous materials. (Is material and container compatible?)
6. Know where emergency equipment and first-aid supplies are located before considering a possibly dangerous task.
7. Know location of Material Safety Data Sheets (MSDS). These will be located in the "Employee Right-to-Know" station for the respective shop/job site.
8. Know what you are expected to do in case of an emergency. Before the commencement of any task, emergency considerations shall be made.

2.5 Shipping/Receiving Personnel Responsibilities

1. Ensure MSDS are received with initial shipment of a hazardous material; if not, contact purchasing to request the appropriate MSDS and also call the Health and Safety Department to determine if there is an MSDS available until the requested MSDS arrives.
2. Ensure labels are affixed to all containers.

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3. Store hazardous materials in designated locations.
4. Use proper personal protective equipment when handling hazardous materials.
5. Report damaged containers or spills to the appropriate Health and Safety Department immediately.
6. Request an MSDS from the manufacturer for any hazardous material that arrives in Findlay from a job. Also, an MSDS shall accompany any hazardous material that is sent to a job.

3.0 HAZARD DETERMINATION

OHM Corporation will rely on Material Safety Data Sheets from hazardous chemical suppliers to meet hazard determination requirements. Other relevant data from laboratory analyses, chemical reference materials, and chemical manufacturers' written evaluation procedures will be utilized when warranted. No other method shall be used to determine chemical hazard unless approved by the Health and Safety Department.

4.0 LABELING

The shipping and receiving supervisors will be responsible for seeing that all containers arriving at OHM Corporation are properly and clearly labeled. Shipping and receiving supervisors shall also check all labels for chemical identity and appropriate hazard warnings. If the hazardous chemical is regulated by OSHA in a substance specific health standard, the supervisor or department manager shall ensure that the labels or other forms of warning used are in accordance with the requirements of that standard. Any container that is not labeled shall be immediately labeled correctly after initial discovery.

Each supervisor or department manager shall be responsible for seeing that all portable containers used in their work area are properly labeled with chemical identity and hazard warning.

Supervisors or department managers shall also ensure that labels on hazardous chemical containers are not removed or defaced unless the container is immediately marked with the required information and that all labels are legible in English and prominently displayed on the container or readily available in the work area throughout each shift.

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If any container is found and the contents cannot be identified, the supervisor or manager shall be contacted immediately. When proper identification is made, a label shall be affixed to the container immediately. If it is discovered that no MSDS is available, the manufacturer and the Health and Safety Department shall be contacted to assist in locating the proper MSDS. If there is no way to identify the material in the container, the container should be set aside, away from all personnel until it can be tested by the Health and Safety Department or laboratory personnel. Supervisors and managers shall communicate their findings or awareness of such containers to all personnel in the area and to those who enter later.

5.0 MATERIAL SAFETY DATA SHEETS (MSDS)

Each supervisor or department manager at OHM Corporation will be responsible for maintaining a current MSDS relevant to the hazardous chemicals used in their area. The Health and Safety Department will be responsible for compiling the master MSDS file for the facility and aiding all shops/job sites with the completion and maintenance of their respective MSDS files.

All MSDS will be readily available for review by all employees during each work shift. Each shop/job site will designate a clearly marked "Employee Right-to-Know" station where employees can immediately obtain an MSDS and the required information in an emergency. MSDSs shall also be made available, upon request, to designated representatives, other employer's employees, and to any OSHA inspector in accordance with the requirements of 29 CFR 1910.1200(e).

Although manufacturers are required to provide employers with MSDSs on an initial chemical shipment, OHM Corporation purchasing agents (and supervisors purchasing their own material) shall request MSDSs and updates to MSDS on all purchase orders. Supervisors and department managers that are without proper MSDSs shall be responsible for requesting this information from manufacturers for chemicals. A file of followup letters shall be maintained for all hazardous chemical shipments received without MSDSs.

6.0 EMPLOYEE INFORMATION AND TRAINING

It is the responsibility of the supervisor in charge of each employee to ensure that the employee is properly trained. Training employees on chemical hazards and chemical handling is accomplished at the time of initial employment at OHM Corporation, whenever a new chemical (or physical) hazard

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is introduced into the work area, and through ongoing formal and informal training programs. Additionally, chemical hazards are communicated to employees through daily, morning, shop specific safety meetings, which shall be documented according to topic, major points discussed, and names of those attending (attendance is mandatory). Also, biweekly hazardous chemical safety meetings will be prepared by the Health and Safety Department using similar documentation for shop areas. Attendance is mandatory for these meetings also. Documentation for shop safety meetings will be available in the respective Employee Right-to Know stations and biweekly safety meeting documentation will be available in the Health and Safety Department to all employees for further referencing and questioning. Records of all formal training conducted at OHM Corporation is coordinated and maintained by the Training Department secretary.

At a minimum, OHM Corporation will inform employees on the following:

- o The requirements of 29 CFR 1910.1200--Hazard Communication--Evaluating the potential hazards of chemicals and communicating information concerning hazards and appropriate protective measures to employees. This is accomplished in several different ways including, but not limited to 40-hour OSHA Hazardous Waste Worker Training (29 CFR 1910.120), Shop safety meetings, job site safety meetings, Health and Safety Department safety meetings, and formal and informal training about specific chemical hazards.
- o The location and availability of the written hazard communication program, list of hazardous chemicals, and MSDS sheets--Notices will be periodically posted on the employee bulletin boards providing the location of the above material.
- o Any operations in their work area where hazardous chemicals are present.
- o What the company has done to lessen or prevent workers' exposure to these chemicals.

Employee training shall include at least:

- o Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area, (monitoring instruments, visual appearance or odor), and acute and chronic health effects.

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- o The physical and health hazards of the chemicals in the work area (accomplished through periodic physical and chemical hazard awareness sessions developed by the Health and Safety Department). These sessions shall serve as chemical hazards refreshers.
- o The methods of preventing exposure to hazardous chemicals including the measures OHM Corporation has taken to protect the employees.
- o Procedures to follow if OHM Corporation employees are exposed to hazardous chemicals (location of nearest phone, emergency eyewash, and shower will be included). These discussions shall include proper operating procedures for all emergency equipment.
- o The details of the hazard communication program developed by OHM Corporation, including an explanation of the labeling system and the Material Safety Data Sheets, and how employees can obtain and use the appropriate hazard information.
- o Standard operating procedures within each respective shop. OHM Corporation company policy determines what is considered standard operating procedures.
- o Procedures for workers involved in non-routine tasks.

Each supervisor or department manager shall ensure that the above training is emphasized to OHM Corporation employees. The Health and Safety Department will ensure that each shop, department, and job site is properly informing and training all employees through daily group meetings and individual discussions. Whenever a new hazardous chemical is placed into use, the supervisor or department manager shall inform the employees of the hazards said chemical may pose. The supervisor or manager shall also be responsible for obtaining and making available an MSDS for the new chemical.

7.0 HAZARDOUS NON-ROUTINE TASKS

Occasionally, employees at OHM Corporation are required to perform tasks which are considered to be non-routine. All tasks considered to be non-routine shall be carefully discussed among the supervisor and those performing the task. This safety briefing shall include all possible hazards that may be encountered while completing the task, including:

- o Hazard recognition
- o Chemicals involved and their hazardous properties

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- o Physical hazards
- o Methods of avoiding all hazards (technical instruments, proper personal protective equipment, etc.)

The following is a list of some of the non-routine tasks which may occur at OHM Corporation together with some information needed to complete the tasks safely.

- o Confined Space Entry
 - Obtain confined space entry procedure/permit from Health and Safety Department and follow all protocol before beginning task. Complete and have supervisor sign permit before any work begins.
 - Monitor atmosphere with explosimeter, oxygen meter, and any toxic gas meter as may be appropriate.
 - Discuss specific chemical hazards.
 - Discuss protective/safety measures the employee can take (e.g., Personal protective equipment and engineering controls) use of life lines, lock-out/tagout procedures, etc.
 - Measures the company has taken to lessen the hazards including ventilation, respirator, presence of another employee, and emergency procedures.
- o Excavation, Trenching, and Shoring
 - Obtain guidelines from Health and Safety Department before beginning task.
 - Comply with all requirements set forth for this activity in 29 CFR Subpart P (excavating, trenching, shoring).
 - Discuss specific chemical hazards.
 - Follow confined space entry procedure above if trench is above shoulder height.
 - Discuss protective/safety measures the employee can take.
 - Review appropriate accident prevention steps.
- o Decontamination of Equipment.

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- Determine possible contaminants and the hazards associated with them.
- Determine personal protection needed by contacting the Health and Safety Department.
- Alert all personnel in areas of contamination and decontamination
- Contain and secure all contaminated materials and decontamination materials.
- Contact the Health and Safety Department for proper disposal.

It is company policy that no OHM Corporation employee will begin work on any non-routine task without first receiving a safety briefing from their supervisor or a Health and Safety Department representative.

8.0 INFORMING CONTRACTORS

It shall be the responsibility of the OHM Corporation purchasing agent and the supervisor in the contracted work area to provide the contractors with the following information:

- o Hazardous chemicals to which they may be exposed while performing a task including the following:
 - Chemical properties
 - Physical properties
 - Acute/Chronic health effects
- o Location of "Employee Right-to Know" station which includes the following:
 - MSDS for work area
 - Hazard Communication Program
 - Other relevant safety material
- o Precautionary measures to be taken to protect employees from chemical and physical hazards.
- o Location of nearest emergency equipment (fire extinguisher, eyewash, shower, phone, first-aid kit, etc.)
- o Procedures to follow in the event of employee exposure.

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- o Steps OHM Corporation has taken to reduce the risk of exposure to physical and chemical hazards including the following:
 - Safety meetings
 - Hazard Communication Program
 - Proper storage and labeling of hazardous chemicals
 - Health and Safety Department shop audits
- o The methods used to label all hazardous chemicals.

The Health and Safety Department shall offer assistance in providing the above information to contractors working at OHM Corporation. On initial visit by a contractor to OHM Corporation, a "Contractor Right-to-Know" release form shall be completed. This form will state that the above information has been communicated to the perspective contractor.

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